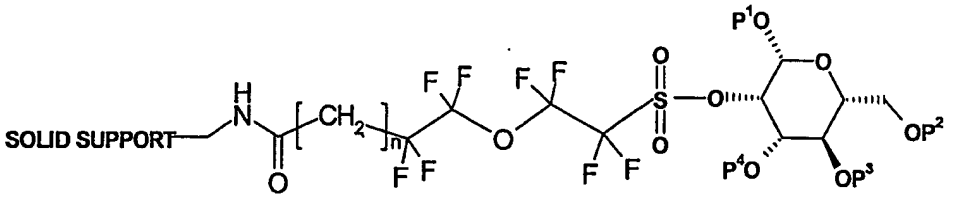
Claims

1. A compound of formula (I):



(I)

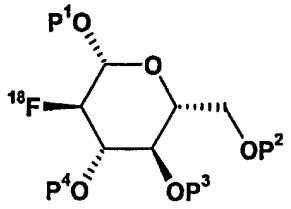
wherein P^1, P^2, P^3, and P^4 are each independently hydrogen or a protecting group; and n is an integer of from 2 to 20.

2. A compound of formula (I) according to claim 1 in which n is 4 to 12.

3. A compound of formula (I) according to claim 1 or 2 in which n is 6 to 10.

4. A compound of formula (I) according to any of claims 1 to 3 in which n is 10.

5. A process for the production of 2-^{18}F-fluoro-2-deoxy-D-glucose (^{18}F-FDG) which comprises treatment of a compound of formula (I) according to any of claims 1 to 4,
with $^{18}F^-$ to produce the labelled tracer of formula (II)



(II)

wherein P^1, P^2, P^3, and P^4 are each independently hydrogen or a protecting group; optionally followed by
(i) removal of excess $^{18}F^-$, for example by ion-exchange chromatography; and/or
(ii) removal of the protecting groups; and/or
(iii) removal of organic solvent; and/or
(iv) formulation of the resultant compound of formula (II) as an aqueous solution.

6. A radiopharmaceutical kit for the preparation of ^{18}F-FDG for use in PET, which comprises:

(v) a vessel containing a compound of formula (I) according to any of claims 1 to 4 ; and

(vi) means for eluting the vessel with a source of $^{18}F^-$;

(vii) an ion-exchange cartridge for removal of excess $^{18}F^-$; and optionally

(viii) a cartridge for solid-phase deprotection of the resultant product of formula (II) as defined in claim 5 .

7. A cartridge for a radiopharmaceutical kit for the preparation of an ^{18}F-FDG for use in PET which comprises:

(i) a vessel containing a compound of formula (I) according to any of claims 1 to 4; and

(ii) means for eluting the vessel with a source of $^{18}F^-$.

8. A method for obtaining a diagnostic PET image which comprises the step of using a radiopharmaceutical kit or a cartridge for a radiopharmaceutical kit according to claim 6 or 7.